EXAMINER'S AMENDMENT

Terminal Disclaimer

1.   The terminal disclaimer filed on 02/15/2008 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent no. 7,263,071 and copending Application No. 10/990274 has been reviewed and is accepted. The terminal disclaimer has been recorded.

2.   An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3.   Authorization for this examiner's amendment was given in a telephone interview with Mark P. Watson on April 4, 2008.

4.   The application has been amended as follows:

Claim 1, (Previously Presented) A method for tunneling data associated with a packet based multimedia communication standard, comprising:

intercepting a library call associated with the multimedia communication standard;

registering identification data associated with the library call;

adding a Transmission Control Protocol/Internet Protocol (TCP/IP) header over a pre-existing header of a data packet related to the identification data, the method operation of adding a TCP/IP header including,

inserting a flag into a lower byte of a window size field of the TCP/IP

header; and

inserting a checksum into an upper byte of the window size field of the

TCP/IP header; and

transmitting the data packet having the (TCP/IP) header through a firewall.

Claim 2, (Original) The method of claim 1, wherein the method operation of

registering identification data associated with the library call includes,

checking if a port number and a protocol type are defined in a table;

if the port number and the protocol type are not defined in the table, the method

includes,

adding the port number and the protocol type to the table.

Claim 3, (Original) The method of claim 1, wherein the identification data

includes a port number and a protocol type associated with the data packet.

Claim 4 (Cancelled).

Claim 5, (Previously Presented) The method of claim 2, wherein the port number

is port 80 and the protocol type is a TCP.

Claim 6, (Original) The method of claim 1, wherein the method operation of

registering identification data associated with the library call is done prior to advancing

data associated with the library call from an application level of a protocol stack of the

packet based multimedia communication standard to a driver level of the packet based

multimedia communication standard.

Claim 7, (Previously Presented) A method for communicating port traffic through a single Hypertext Transfer Protocol (HTTP) port, comprising:

a) establishing a connection between a first and second computing device;

b) transmitting allocation data associated with the port traffic to a tunneling driver;

c) segmenting the port traffic into datagrams;

d) appending a first header to each one of the datagrams; and

e) appending a Transmission Control Protocol/Internet Protocol (TCP/IP) header over the first header, the method operation of appending a TCP/IP header including,

inserting a flag into a lower byte of a window size field of the TCP/IP header;

and

inserting a checksum into an upper byte of the window size field of the TCP/IP header,

wherein the TCP/IP header is configured to direct each one of the datagrams to the single HTTP port.

Claim 8, (Original) The method of claim 7, wherein the connection is a TCP connection and the single HTTP port is port 80.

Claim 9, (Original) The method of claim 7, wherein the method operation of transmitting allocation data includes,

defining a port number and a protocol type associated with the port traffic.

Claim 10, (Original) The method of claim 7, further comprising:

setting a SYN flag in the TCP/IP header for initiation of the connection from behind a

firewall; and

setting SYN+ACK flags in the TCP/IP header for responses to the initiation of the

connection from outside of the firewall.

Claim 11 (Cancelled).

Claim 12, (Previously presented) A tangible computer readable storage medium

having program instructions for tunneling data associated with a packet based

multimedia communication standard, comprising:

program instructions for intercepting a library call associated with the multimedia

communication standard;

program instructions for registering identification data associated with the library

call; program instructions for adding a Transmission Control Protocol/Internet Protocol

(TCP/IP) header over a pre-existing header of a data packet related to the identification

data, the program instructions for adding a TCP/IP header including,

program instructions for inserting a flag into a lower byte of a window size

field of the TCP/IP header; and

program instructions for inserting a checksum into an upper byte of the

window size field of the TCP/IP header; and

program instructions for transmitting the data packet having the (TCP/IP) header

through a firewall.

Claim 13, (Previously presented) The tangible computer readable storage medium of claim 12, wherein the program instructions for operation of registering identification data associated with the library call includes,

program instructions for checking if a port number and a protocol type are defined in a table; and

program instructions for adding the port number and the protocol type to the table.

Claim 14, (Previously presented) The tangible computer readable storage medium of claim 12, wherein the identification data includes a port number and a protocol type associated with the data packet.

Claim 15 (Cancelled).

Claim 16, (Previously presented) The tangible computer readable storage medium of claim 13, wherein the port number is port 80 and the protocol type is a TCP.

Claim 17, (Previously presented) The tangible computer readable storage medium of claim 12, wherein the program instructions for registering identification data associated with the library call are completed prior to advancing data associated with the library call from an application level of a protocol stack of the packet based multimedia communication standard to a driver level of the packet based multimedia communication standard.

Claim 18, (Previously presented) A tangible computer readable storage medium having program instructions for communicating port traffic through a single Hypertext Transfer Protocol (HTTP) port, comprising:

a) program instructions for establishing a connection between a first and second computing device;

b) program instructions for transmitting allocation data associated with the port traffic to a tunneling driver;

c) program instructions for segmenting the port traffic into datagrams;

d) program instructions for appending a first header to each one of the datagrams; and

e) program instructions for appending a Transmission Control Protocol/Internet Protocol (TCP/IP) header over the first header, the program instructions for appending a TCP/IP header including,

program instructions for inserting a flag into a lower byte of a window size field of the TCP/IP header; and

program instructions for inserting a checksum into an upper byte of the window size field of the TCP/IP header,

wherein the TCP/IP header is configured to direct each one of the datagrams to the single HTTP port.

Claim 19, (Previously presented) The tangible computer readable storage medium of claim 18, wherein the connection is a TCP connection and the single HTTP port is port 80.

Claim 20, (Previously presented) The tangible computer readable storage medium of claim 18, wherein the program instructions for transmitting allocation data includes,

program instructions for defining a port number and a protocol type associated with the

port traffic.

Claim 21, (Previously presented) The tangible computer readable storage

medium of claim 18, wherein the first header is one of a TCP header and a User

Datagram Protocol (UDP) header.

Claim 22 (Cancelled).

Claim 23, (Currently amended) A system for tunneling port traffic destined for

multiple ports through a single port, comprising:

a server configured to transmit data packets each having a tunneling header in

addition to a packet header;

a firewall limiting a number of unblocked TCP ports, the firewall capable of

analyzing the tunneling header, wherein the tunneling header is associated with the

single port so that the firewall allows the data packets to pass through; and

a client configured to receive the data packets from the firewall through the single

port, the client further configured to identify a flag and a checksum associated with the

tunneling header in order to strip the tunneling header for access to the packet header,

wherein the flag and the checksum are incorporated into a lower byte and a upper byte

of a window size ~~region~~ field of the tunneling header respectively.

Claim 24 (Cancelled).

Claim 25, (Original) The system of claim 23, wherein the packet header is a User

Datagram Protocol (UDP) packet header.

Claim 26, (Original) The system of claim 23, wherein the single port is hypertext transfer protocol (HTTP) port 80.

Claim 27, (Currently amended) A communication method utilizing protocol stack for enabling multimedia communication between communicating devices, comprising:

at an application level, identifying whether received communication data is for a communication port; and

if the received communication data is for the communication port, forwarding identification data regarding the received communication data to a table in advance of forwarding the received communication data to a driver level of the communication protocol stack, wherein a tunneling driver associated with the driver level inserts a tunneling header over a header of the communication data when the communication data is for the communication port, wherein the method operation of inserting a tunneling header includes,

inserting a flag into a lower byte of a window size field of the tunneling header; and

inserting a checksum into an upper byte of the window size field of the tunneling header.

Claim 28, (Original) The communication protocol stack of claim 27, further comprising:

forwarding the communication data to the driver level; and

checking whether the identification data associated with the communication data
is listed in the table.

Claim 29, (Previously Presented) The communication protocol stack of claim 28,
further comprising:

incorporating a firewall Internet protocol address and a firewall port number into
the tunneling header.

Claim 30 (Cancelled).

Claim 31, (Previously Presented) The method of claim 1, wherein the flag and
checksum identify the data packet as a connectionless TCP/IP packet.

Claim 32, (Previously Presented) The method of claim 1, wherein the TCP/IP
header flag is set as SYN if a client initiates a connection behind the firewall, and the
TCP/IP header flag is set as SYN+ACK if a server responds back to the client.

Allowable Subject Matter

5.   Claims 1-3, 5-10, 12-14, 16-21, 23, 25-29 and 31-32 are allowed.

6.   The following is an examiner's statement of reasons for allowance:

An example, as to claim 1, the preamble has been given patentable weight since
the claim body refers back to the preamble. See the "the multimedia communication
standard" at line 3. Accordingly, the claimed invention is directed toward a method for
tunneling data associated with a packet based multimedia communication standard with
features of adding a TCP/IP header over a pre-existing header of a data packet related
to the identification data, where the method operation of adding a TCP/IP header

includes inserting a flag into a lower byte of a window size field of the TCP/IP header,

and inserting a checksum into an upper byte of the window size field of the TCP/IP

header. The prior art of record taking singly or in combination does not teach or suggest

a combination of method steps as claimed that is used for tunneling data associated

with a packet based multimedia communication standard and includes the step of

dividing the window size field into two parts and filling them with a flag and a checksum.

The closest prior art of record (i.e Eisenberg et al. (PGPUB: 2006/0168321 A1) and

Philbrick et al. (PGPUB: US 2007/0188665 A1)) does not teach or suggest this feature.

Based on this reasoning, claims 1, 7, 12 18, 23 and 27 are allowable over the prior art

of record.

Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lin Liu whose telephone number is (571) 270-1447.

The examiner can normally be reached on Monday - Friday, 8:00am - 5:30pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. L./
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Examiner, Art Unit 2145

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